

REMARKS

This is intended as a full and complete response to the Final Office Action dated March 21, 2007, having a shortened statutory period for response set to expire on June 21, 2007. Claims 1-19 have been examined. The Examiner rejected claims 1-14 and 16-19 under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,744,986 to Vohra in view of U.S. Patent No. 5,943,149 to Cearns. The Examiner rejected claim 15 under 35 U.S.C. § 103(a) as being obvious over Vohra, Cearns, and Applicants' admitted prior art at Figure 3.

Examiner Interview

Applicants would like to thank the Examiner for conducting the interview on May 17, 2007. The arguments herein are presented in accordance with the substance of the interview to place the application in better condition for allowance.

Claim Rejections Under 35 U.S.C. § 103(a)

The Examiner rejected claims 1, 16, and 17 as being obvious over Vohra in view of Cearns. Applicants respectfully traverse the rejection.

The Examiner failed to establish a prima facie case of obviousness because the prior art references when combined must teach or suggest all the claim limitations in accordance with MPEP 2143. Claims 1, 16, and 17 include the limitations of (i) a first bandpass filter connected to a first cascaded series of channel filter assemblies via a transmission port and (ii) a third bandpass filter connected to a reflection port of the first bandpass filter and connected to a third cascaded series of channel filter assemblies via a transmission port. The combination of Vohra and Cearns fails to disclose these limitations. Specifically, as admitted by the Examiner, Vohra fails to disclose the details of a multiplexer section and a demultiplexer section, and therefore the Examiner relies on Cearns for these teachings. However, Cearns also fails to teach or suggest all the claim limitations in accordance with MPEP 2143.03. For instance, Cearns clearly does not teach a first bandpass filter connected to a first cascaded series of channel filter assemblies via a transmission port and a third bandpass filter connected to a third cascaded series of channel filter assemblies via a transmission port, wherein the third bandpass filter is also connected to a reflection port of the first bandpass filter, as recited in claims 1, 16, and 17. In contrast, Cearns merely teaches a bandpass filter (20) connected to a first cascaded series of channel filter

assemblies via a transmission port and a second cascaded series of channel filter assemblies via a reflection port (see Cearns, Figure 5). In other words, there is no mention in Cearns of a first bandpass filter connected to a first cascaded series of channel filter assemblies via a transmission port and a third bandpass filter connected to a reflection port of the first bandpass filter and connected to a third cascaded series of channel filter assemblies via a transmission port. As such, Cearns fails to cure the deficiencies of Vohra. Therefore, the combination of Vohra and Cearns fails to teach all the limitations of claims 1, 16, and 17.

Moreover, Claims 1, 16, and 17 include the limitations of (i) a cascaded series of channel filter assemblies optically coupled to a second bandpass filter via a transmission port and (ii) a cascaded series of channel filter assemblies optically coupled to a fourth bandpass filter via a transmission line, wherein the fourth bandpass filter is also connected to a reflection port of the second bandpass filter. Again, as admitted by the Examiner, Vohra fails to disclose the details of a multiplexer section and a demultiplexer section. Further, there is no mention of these limitations in Cearns. As such, the Examiner relies on the following three separate phrases to indicate that it would be obvious for Cearns to teach these limitations.

1. OPTICAL MULTIPLEXOR/DEMULITPLEXOR USING A NARROW BAND FILTER FOLLOWED BY A WIDEBAND FILTER (i.e. title)
2. “Likewise, the filter performs the same function for light traveling in the opposite direction.” (col. 2, lines 33-35)
3. “It is therefore an object of this invention to provide a system for multiplexing and demultiplexing wherein overall signal loss is minimized.” (col. 2, lines 65-67)

These phrases in Cearns clearly do not teach or suggest the specific limitations of a cascaded series of channel filter assemblies optically coupled to a second bandpass filter via a transmission port and a cascaded series of channel filter assemblies optically coupled to a fourth bandpass filter via a transmission line, wherein the fourth bandpass filter is also connected to a reflection port of the second bandpass filter, as recited in claims 1, 16, and 17. Therefore, the combination of Vohra and Cearns again fails to teach all the limitations of claims 1, 16, and 17.

Further, the Examiner failed to establish a *prima facie* case of obviousness because there must be some suggestion or motivation, either in the references themselves or in the knowledge

generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings in accordance with MPEP 2143. The Examiner admits that Vohra fails to disclose the specifics of a multiplexer section and a demultiplexer section. The Examiner attempts to supplement this missing part by utilizing Cearns. The Examiner states that one of ordinary skill in the art would be motivated to combine the references for improving the channel spacing in the multiplexer section and the demultiplexer section. According to MPEP 2143.01, the references must suggest the desirability of the claimed invention. Specifically, the nature of the problem to be solved must provide a motivation to combine the references. The problem solved by Vohra is to provide an optical system which allows dropping and adding of optical data channels in wavelength agile optical communications networks (see Vohra, col. 2, lines 57-60). One of ordinary skill in the art would not look to a demultiplexer that is configured to reduce power losses between channels, as disclosed in Cearns, to solve the dropping and adding optical data channel problem disclosed in Vohra because the problem and solution disclosed in Vohra relate to components external to the demultiplexer. Without a motivation to combine Vohra and Cearns, the references may not be used to render claims 1, 16, and 17 obvious.

As the foregoing illustrates, the combination of Vohra and Cearns fails to render claims 1, 16, and 17 obvious. Therefore, Applicants respectfully request the 103(a) rejection of claims 1, 16, and 17 be removed and the allowance of the same. Additionally, since claims 2-14 depend from claim 1 and claims 18-19 depend from claim 17, these claims are allowable for at least the same reasons as claims 1 and 17.

The Examiner rejected claim 15 as being obvious over Vohra, Cearns, and Applicants' admitted prior art at Figure 3. Applicants respectfully traverse the rejection. Claim 15 depends from claim 1. As set forth above, the combination of Vohra and Cearns fails to teach or suggest all the limitations in claim 1. Further, Applicants' admitted prior art at Figure 3 fails to cure the deficiencies of the combination of Vohra and Cearns. This failure precludes the combination of Vohra, Cearns, and Applicants' admitted prior art at Figure 3 from rendering claim 15 obvious. Applicants therefore submit that claim 15 is in condition for allowance and respectfully request withdrawal of the § 103(a) rejection.

Conclusion

Having addressed all issues set out in the office action, Applicants respectfully submit that the case is in condition for allowance. If the Examiner has any questions, please contact the Applicants' undersigned representative at the number provided below.

Respectfully submitted,



Walter C. Grollitsch
Registration No. 48,678
PATTERSON & SHERIDAN, L.L.P.
3040 Post Oak Blvd. Suite 1500
Houston, TX 77056
Telephone: (713) 623-4844
Facsimile: (713) 623-4846
Attorney for Applicants